Mazama Pocket Gopher
Habitat Management Plan

for the
Thurston County Tilley Road Facility

Developed for
Thurston County
Roads and Maintenance

Prepared by:
Brian Missildine

June 18, 2009

SKILLINGS CONNOLLY

INTRODUCTION

Thurston County Roads and Transportation is proposing to expand their facilities at the Tilley Road Maintenance Facility (Exhibit 1). The County has recently purchased property to the north of the existing facility. As part of the permitting process to expand the facility, Thurston County Planning has requested a Mazama Pocket Gopher (*Thomomys mazama*) survey of the newly acquired area. Typically, pocket gopher surveys are required in Thurston County if the proposed project area's soils are suitable for Mazama Pocket Gopher habitat.

The proposed project area is approximately 4.8 acres. The western portion of the property had been logged and cleared in early 2000. The eastern portion of the property contains second growth Douglas fir with manicured lawn (Exhibit 2). The proposed plan is to remove two homes and several outbuildings from the property and construct an office, parking lot, sidewalks, well, and septic field.

A Mazama Pocket Gopher survey was conducted on February 9, 2009, by Skillings Connolly Senior Scientist Brian Missildine and was verified by Washington Department of Fish and Wildlife (WDFW) Biologist Tammy Schmidt on February 12, 2009. The Mazama Pocket Gopher survey was conducted according to WDFW protocol. Pocket gopher mounds were observed primarily on the western half of the property with a few mounds on the south central portion of the property (Exhibit 3). After mapping and buffering the existing mounds, it was obvious that the setbacks would intrude on the proposed building designs. Subsequently, a meeting between WDFW, Thurston County Development Services and Thurston County Roads and Transportation on March 12, 2009, was conducted to determine reasonable use of the property and to discuss the development of a Mazama Pocket Gopher Habitat Management Plan (HMP).

The results of the meeting were to 1) redesign the location of the proposed structures further to the east to avoid Mazama Pocket Gopher mounds and buffers; 2) survey the area south of the fence for suitable habitat; 3) develop an HMP allowing for reasonable use of the property by offsetting lost gopher habitat into the area south of the property; and, 4) setting aside the western portion of the property for gopher habitat.

After initial surveys of the property to the south, it was determined that this area was already occupied by Mazama Pocket Gophers and would not work for the new set-aside. Furthermore, some of the area to the south is unsuitable habitat because it is wetlands. The only other on-site option is the area where the new septic drain field will be located in the north-central section of the property (Exhibit 3).

The following HMP was developed and submitted to WDFW for approval.

SITE LOCATION

The proposed project is located at 9521 Tilley Road, Olympia, Thurston County Washington Section 22, Township 17, Range 2W, parcels #12722110300 and 12722140100. This Mazama Pocket Gopher HMP incorporates the addresses 9521 and 9605 Tilley Road (Exhibit 1).

METHODOLOGY

The Mazama Pocket Gopher survey is inclusive of the whole property regardless of the proposed use. All Mazama Pocket Gopher mounds are surveyed within the property. Any mound believed active in the recent past is included in the count. Mounds located on the property boundaries (including road right-of-way) are included in count regardless of partiality.

The project area was walked in transects separated by approximately 10 feet. All mounds were surveyed and located with GPS in accordance with WDFW protocol. Each mound received a 10-meter buffer which was dissolved where mounds were grouped. Area within the buffer was calculated and multiplied by a factor of three to determine the set-aside. The set-aside was then plotted on an aerial photo and over the design plans to determine where the set-aside impacted the proposed building location.

HABITAT MANAGEMENT PLAN

Management Factors

The following factors have been developed and have been implemented where applicable into the HMP.

- The landowners' need to identify the land management prospectus goals while considering the need to provide habitat and long-term land management practices for the Mazama Pocket Gopher.

- Mazama Pocket Gopher habitat use was considered through a mound survey conducted by Skillings Connolly, current status of the population, and scientific literature concerning Mazama Pocket Gophers.

- Per WDFW Priority Species policy, WDFW shall seek mitigation for unmitigated or under mitigated existing projects. Criteria for prioritizing unmitigated projects are:
    a. Fish and wildlife losses from the project.
    b. Potential gains of fish and wildlife.
    c. Likelihood of achieving mitigation.
    d. Time required achieving mitigation.
    e. Presence of priority habitats and species.

- Through internal discussions, WDFW is currently recommending a mitigation ratio for habitat occupied by Mazama Pocket Gopher of 3:1. That is a set-aside of three times the habitat (most densely populated area) occupied by gophers. WDFW does not currently support nor allow the relocation of Mazama Pocket Gopher as relocation has not currently been proven to be successful.

Habitat Management Plan Conditions

The following conditions indicate how guidance is applied to all development projects irrespective of geographic conditions of the project property. To allow for reasonable use, the small concentration of gophers in the southeast-central area will be excluded from the HMP. The north-central area will

used as the set-aside for the loss of gopher habitat in the southeast central section of the property (Exhibit 3).

- The area identified as the set-aside for Mazama Pocket Gophers will be identified to encompass the majority of mounds or the largest concentration of mounds on the subject property. The subject property's primary gopher use is located from the central portion to the western border as well as along the southeastern section of the property (See Exhibit 3).

- The set-aside location and requirement to adhere to the conditions of this HMP will be clearly stated on the title to the property. It is suggested that the set-aside be designated as a separate tract on the title.

- If there is a neighborhood association or other land management entity they must incorporate the HMP into their covenants and by-laws and maintain in perpetuity.

- The HMP will include notification requirements for changes in land use or ownership and transfer of management requirements to the new owners.

- The attached maps (Exhibit 3) show the distribution of surveyed gopher mounds. Based on this survey and the required mitigation ratio the set-aside area designated for Mazama Pocket Gopher protection and habitat management equates to 4.6 acres.

- The applicant must adhere to the following habitat management requirements within the gopher set-aside including the new set-aside:

    - Before construction/deconstruction begins, all Mazama Pocket Gopher mounds will be clearly marked by a certified gopher biologist.

    - Construction within the new set-aside will occur as soon as possible in order to establish Mazama Pocket Gopher Habitat. This will include scarifying the land and replanting with vegetation from the Native Vegetation section below.

    - ALL grading, filling, and excavation activities within the designated set-aside area should be conducted in a manner that avoids any killing of gophers. In order to avoid killing gophers the following measure will be implemented:

        - Obtain a wildlife collection permit to trap and move gophers that are within the construction zone (if any). Gophers would be moved to a location on-site.
        - Use water to deter occupancy of the impact area.
        - Excavate the upper 2-3 inches of ground first and allow gophers to evade the impact area.
        - During the drain field construction when the top 2-3 inches is disturbed first, the qualified bio should be on-site to monitor and respond to gopher protection needs should tunnels be identified where no mounds and occupied habitat are known. The responding requirement will include reporting all circumstances to the jurisdiction.

- Trenching for drain pipes and excavation of the drain fields will be at the minimum width necessary for construction (Exhibit 4).

- Remove any Scotch Broom (*Cytisus scoparius*) immediately using hand techniques (i.e. no significant movement of earth or large machinery). Very little, if any Scotch Broom is located within the set-aside areas; however, Scotch Broom does exist on adjacent properties so the County will need to make sure the Scotch Broom does not colonize within the gopher set-aside.

- Mow the pocket gopher set-aside (at the height of 5 to 6 inches above the ground surface) twice a year for Scotch Broom control and to enhance herb layer protection including prairie grasses.

- In areas where mowing is not feasible (i.e. uneven terrain or small hills), the landowner will incorporate ways to prevent the encroachment of Scotch Broom and Himalayan Blackberry while enhancing native prairie vegetation (e.g. use of hand tools that include grass/weed trimmer). No significant movement of earth or large machinery will be allowed within the set-aside.

- Install perimeter fencing around the set-aside per local jurisdiction fencing recommendations.

- Install educational signs informing the public of Mazama Pocket Gophers including habitat and management needs and post "No entry to set-aside area".

- Avoid planting trees (except those discussed in the Native Vegetation section) or using herbicide/insecticide in and around the set-aside area.

- Avoid the use of large machinery or significant earth movement within the set-aside after construction and scarification (with the exception of a mower).

- The current gravel road on the southern border of the new property running through the set-aside can remain and be maintained so long as no equipment or vehicles leave the road. Paving this road is not recommended.

- The well can be drilled and a well house constructed within the Mazama Pocket Gopher set-aside as long as the equipment avoids gopher mounds. Gopher mounds will be marked by a qualified pocket gopher biologist before well drilling occurs. It is also important to note that the well receives a 100-foot buffer in all directions which will aid in the protection of the Mazama Pocket Gopher set-aside.

    - Additional Best Management Practices for well drilling.
        - Placement of the well will be outside of any 10 meter buffer (see Exhibit 3.
        - Well drilling and casing will be installed in such a way to minimize vibration and noise.
        - Well drilling will be conducted between August and February to minimize any noise or vibration impacts during the birthing season.

    - Well infrastructure (pipes) route will be placed within the gravel road prism to avoid gopher mounds and buffers.

- The existing house and shop in the northwestern section of the property that is located within the set-aside can be removed. However, gopher mounds will be clearly marked by a qualified pocket gopher biologist before removal. In addition, once the house and shop are removed, the land (including the driveway) will be scarified and replanted with native prairie grasses and plants as recommended in the Native Vegetation section to improve Mazama Pocket Gopher habitat. This area will be included in the new set-aside.

NATIVE VEGETATION

The planting plan will incorporate herbaceous species and minimize the number of trees proposed for planting in the tree tracts. Tree density should be minimized and deciduous trees should be selected over conifers (per County approval). Examples of beneficial herbaceous plants include legumes, broadleaf forbs, and grasses such as broadleaf lupine (*Lupinus latifolius*), clover (*Trifolium sp.*), nodding onion (*Allium cernuum*), common yarrow (*Achillea millefolium*), field chickweed (*Cerastium arvense*), showy fleabane (*Erigeron speciosus*), coast strawberry (*Fragaria chiloensis*), California Oat Grass (*Danthonia californica*), June Grass *(Koeleria cristata*), Harsh Paint Brush (*Castilleja hispida*), Shooting Star (*Dodecatheon meadia*), Sea Pink (*Armeria martima*) White Topped Aster *(Oclemena reticulata*),and blue wildrye (*Elymus glaucus*). Possible deciduous trees to plant include Oregon white oak (*Quercus garryana*), big leaf maple (*Acer macrophyllum*) and dogwood (*Cornus sp*).

DURATION OF PROTECTION

The landowner(s) who signs the HMP is responsible for complying with this HMP. If an ownership change occurs, the new owner must sign the HMP or request a new HMP to reflect a change in land use. Any other land use proposals on the property including but not limited to forestry practices, vegetation removal, construction, and changes in major land use activities may be subject to a different set of conditions. It is the landowner's responsibility to notify Thurston County Development Services of any new proposed land use activities.

The conditions of this HMP will apply indefinitely, unless such time as the population of pocket gophers no longer resides on the property thru natural loss or relocation off-site. At such time, WDFW, Thurston County, and the landowner will evaluate the continued need for protection of this Mazama Pocket Gopher habitat. Notice to landowner(s), do not assume that the conditions of this HMP no longer apply.

REVIEW AND AMENDMENT

This HMP will be subject to the following review and amendment procedures. The HMP may be reviewed periodically by Thurston County and the landowner to determine whether: 1) the HMP requires amendment in response to changing Mazama Pocket Gopher and landowner circumstances; or 2) the terms of the HMP comply with applicable laws and regulations; or 3) the parties to the HMP are complying with its terms.

COMPLIANCE

Failure to comply with this HMP is a violation of Thurston County Codes and may be subject to civil or criminal penalty.

_____ _____

_____ _____

Landowner or Agent Print/Date Landowner or Agent Signature/Date

_____

Address

_____

City, State, Zip

_____

Thurston County Representative (Date)

_____

WDFW Representative (Date)

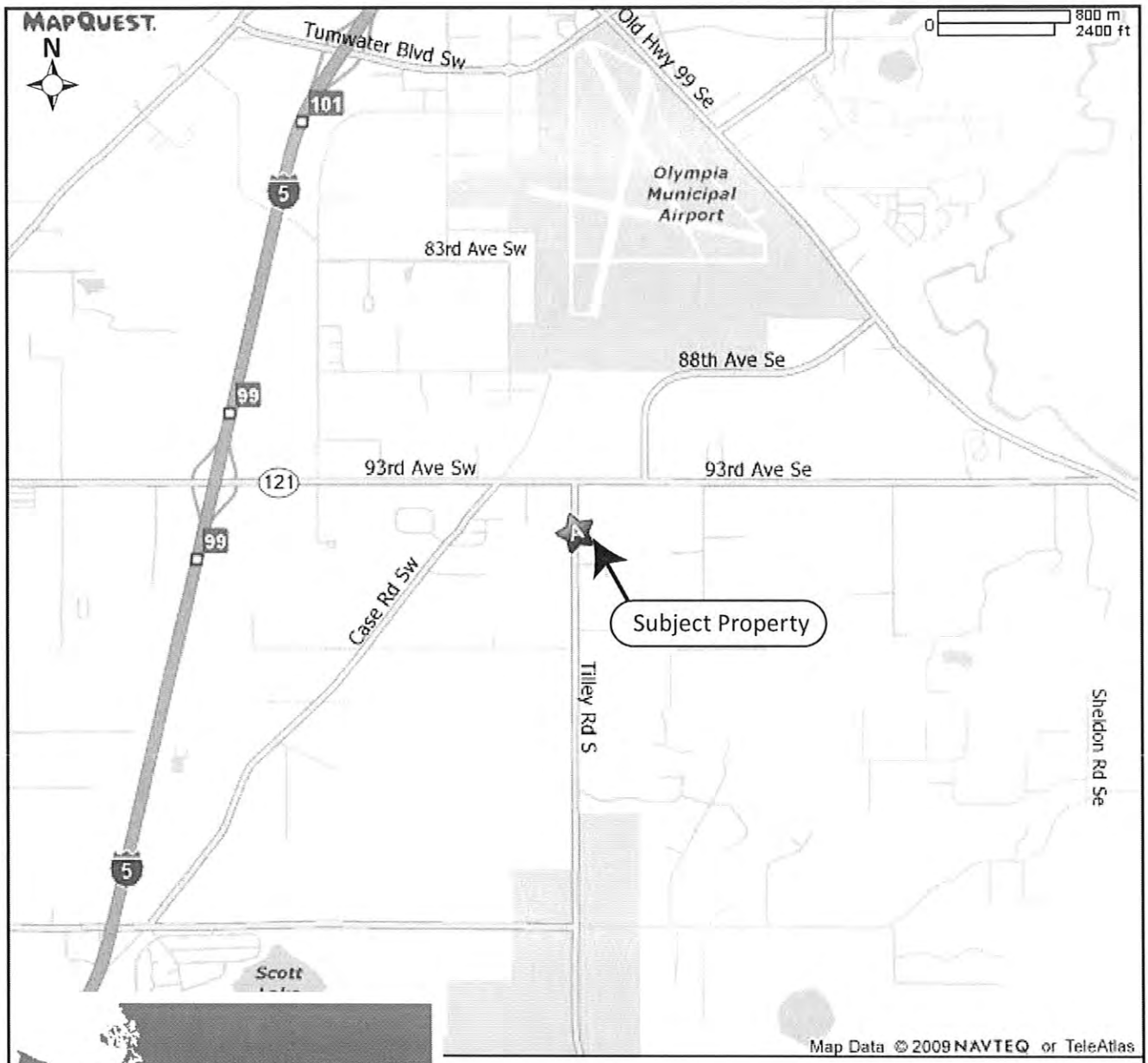
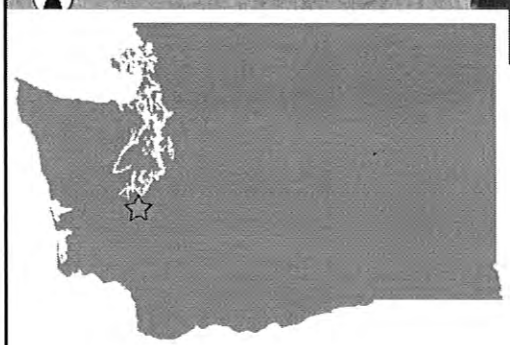


Image source: MapQuest

SKILLINGS CONNOLLY ENVIRONMENTAL	Exhibit 1. Vicinity Map Tilley Road Maintenance Facility	9521 Tilley Road S Olympia, WA 98512



LEGEND

Project boundary

Parcel lines

Image source: Thurston County GeoData

SKILLINGS CONNOLLY ENVIRONMENTAL

Exhibit 2. 2006 Aerial Photo of Project Site
Tilley Road Maintenance Facility

April 15, 2009

9521 Tilley Road S
Olympia, WA 98512

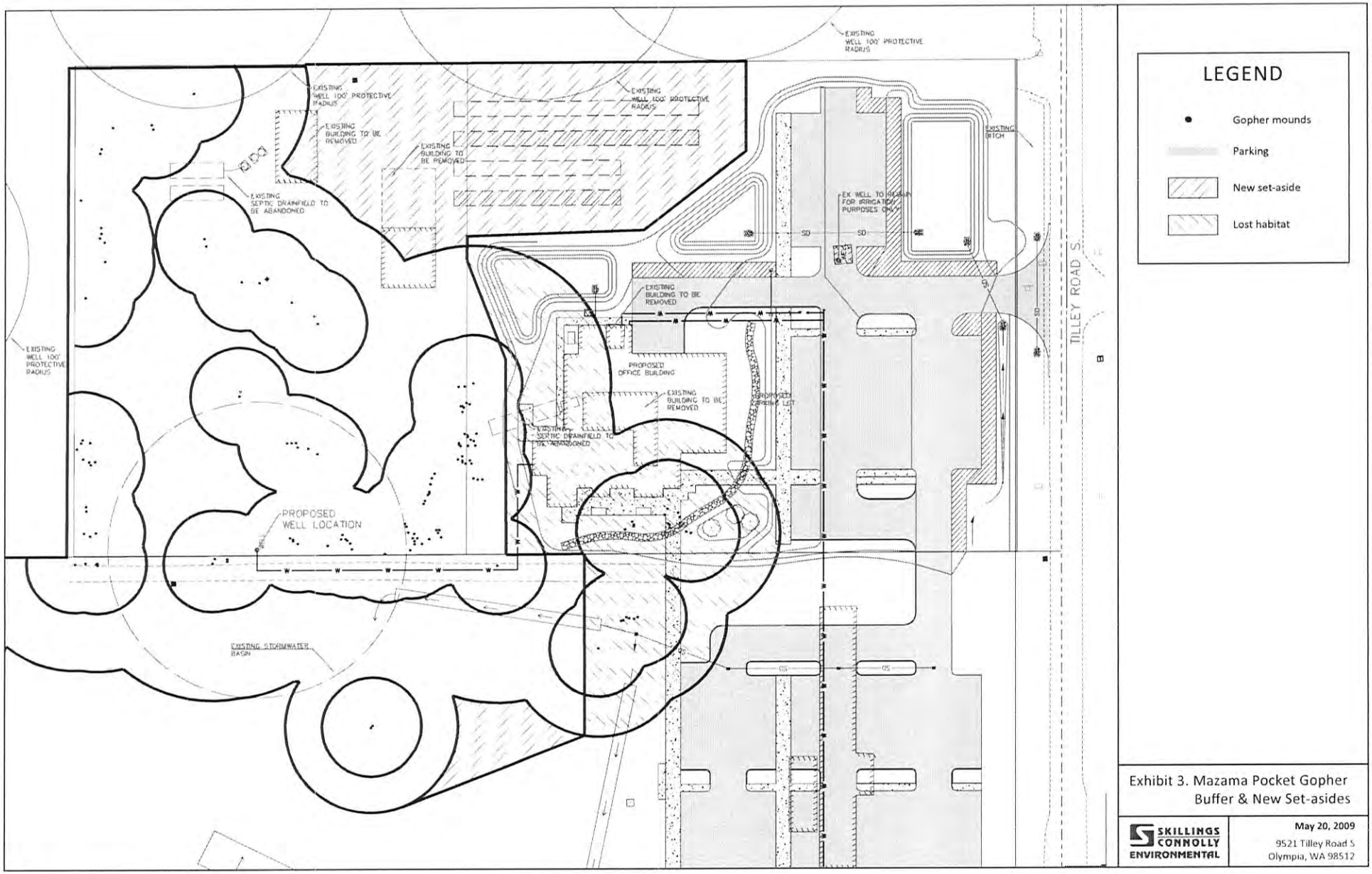
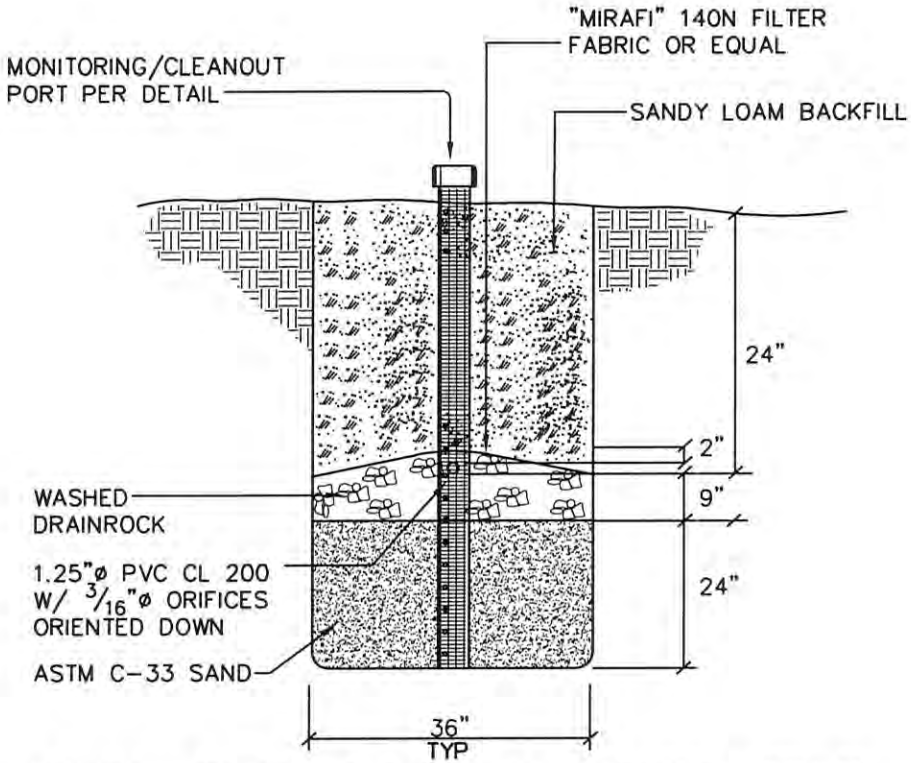


Exhibit 3. Mazama Pocket Gopher Buffer & New Set-asides

SKILLINGS CONNOLLY ENVIRONMENTAL

May 20, 2009
9521 Tilley Road S
Olympia, WA 98512



NOTE: ORIGINAL GROUND SURFACE IS NOT LEVEL OVER EACH LATERAL. BOTTOM OF TRENCH IS TO BE CONSTRUCTED LEVEL.

TRENCH DETAIL

NOT TO SCALE

EXHIBIT 4